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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,839	12/15/2004	Young Il Park	3449-0418PUS1	9010
2292	7590	09/25/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/517,839		PARK, YOUNG II	
	Examiner		Art Unit	
	Tran N. Nguyen		2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The applicant's request for RCE, filed on 8/14/06, is acknowledged. Accordingly, the RCE for the application is acceptable and a RCE has been established. An action on the RCE follows.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 1. Claims 1-11 and 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP-14028570 (hereafter JP'570)** in view of **Hayashi (US 5751085)**.

JP'570 individually substantially discloses a flat vibration motor comprising:

- an upper case;
- a lower case;
- a conductive substrate formed on an upper surface of the lower case;
- a magnet formed on the upper surface of the lower case, for generating magnetic field;
- a conductive brush having an end electrically connected with the substrate;
- a rotational shaft supported at an approximate center portion between the lower case and the upper case;

a rotator inserted onto the rotational shaft to rotate and formed of a resin base; a commutator formed on a lower surface of the rotator and connected to the other end of the brush; wherein the coil is fixed to the base; and a weight formed eccentrically inside the rotator, for enhancing eccentricity of weight center of the rotator; and the coil is received inside the base.

Also, **JP'570** shows in figures 2, 5-6 and 8-11 that the rotator (**r**) with the resin/insulating molded base (**9** in fig 2, or **28** of figs 5-6 and 8-11) that covers all the backside and outer circumference of the coils (**8** in fig 2, or **27** of figs 5-6 and 8-11). However, **JP'570** does not disclose the limitations of *the a coil having an upper end, which is positioned lower than an upper end of the rotator, and the rotator in which the coil is placed covers the upper circumference of the coil.*

Hayashi, however, teaches a molded structure wherein the coils (**33**) are embedded within a resin molded base, wherein the resin base (**35**) covers the backside and outer circumference of the coil (figs 1, 3); particularly the resin base (**35**) also cover the coils' circumferential upper side, i.e., the coils' side that faces the permanent magnet (**43**). In other words, as shown in fig 1, the coil (**33**) having upper circumferential side being positioned lower than an upper end of the resin base (**35**), and the coil's upper circumference is covered by molding resin (**35**). Hayashi teaches that such resin molding enclosed coil structure would eliminate the irregularities of the coils so that the resin base coil structure having an upper face rendered flat. Even though Hayashi's resin base coil structure is used as a stator instead of a rotor as in the claimed invention; however, those skilled in the art would understand that the important teaching of Hayashi ref is that by covering the coils' upper circumference, i.e., the coils' side that faces the permanent magnet, with the resin would eliminate the irregularities of the coils so that the resin base coil structure having a rendered flat upper face that facing the magnet. As a result, the coils are secured and completely enclosed to prevent the coil from any thermally expansion due to generated heat in the coils; thus, the even gap between the coils and the magnet is maintained.

Furthermore, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is

what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Hayashi's resin base coil structure is an analogous art with respect to the claimed invention because the resin base coil structure can be used as a stator or a rotor.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the vibration motor by configuring the a coil that has an upper circumference being covered by resin molding, as taught by Hayashi. Doing so would eliminate the irregularities of the coils so that the rotator having a rendered flat upper face that facing the magnet and also prevent the coil from any thermally expansion due to generated heat in the coils.

2. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **JP'570** and **Hayashi**, further in view of **Yamaguchi et al (US 6,359,364)**.

The combination of **JP'570** and **Hayashi** substantially discloses the claimed invention, except for the limitation of the *power supply means comprises: a conductive terminal formed a lower surface of the lower fixer; and a brush penetrating the lower fixer and having both ends connected to the terminal and the rotator.*

Yamaguchi, however, teaches a flat vibration motor comprising these features (fig 2) for the purpose of there is no deviation when the brushes are installed at the bracket and the supporters can be formed of flexible synthetic resin in order to prevent the brushes from vibrating base of the brush is preferably drawn to the outside and is preferably used as a power supply terminal; therefore, less part counts for the brush and power supply assembly.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the vibration motor by configure the insulating base of the vibration motor housing with a conductive terminal formed a lower surface of the lower fixer; and a brush

penetrating the lower fixer and having both ends connected to the terminal and the rotator, as taught by Yamaguchi. Doing so would mechanically improve the power supply assembly and the brush assembly structure relative to the base of the vibration motor so that less part counts resulting in reduction of manufacturing cost.

3. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP'570** in view of **Hayashi** and **Yamaguchi**.

The combination of **JP'570** and **Hayashi** substantially discloses the claimed invention, except for the limitations of the following:

(a) the a coil having an upper end, which is positioned lower than an upper end of the rotator, and the coil is received inside the base so that the coil is not observed at an upper surface of the rotator;

(b) power supply means comprises: a conductive terminal formed a lower surface of the lower fixer; and a brush penetrating the lower fixer and having both ends connected to the terminal and the rotator.

Hayashi, however, teaches a flat vibration motor comprising a rotator the a coil having an upper end, which is positioned lower than an upper end of the rotator, and the coil is received inside the base so that the coil is not observed at an upper surface of the rotator (fig 7) for the purpose of providing mechanical support as protection for the coil since the coil is a coreless coil.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the vibration motor by position the coil having an upper end, which is positioned lower than an upper end of the rotator, and the coil is received inside the base so that the coil is not observed at an upper surface of the rotator, as taught by Hayashi. Doing so would provide the rotator's coil with mechanical support and protection to improve the structural integrity of the rotator in the rotor.

Yamaguchi, however, teaches a flat vibration motor comprising these features (fig 2) for the purpose of there is no deviation when the brushes are installed at the bracket and the

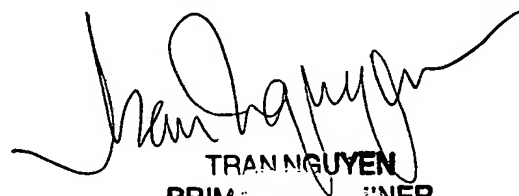
Art Unit: 2834

supporters can be formed of flexible synthetic resin in order to prevent the brushes from vibrating base of the brush is preferably drawn to the outside and is preferably used as a power supply terminal; therefore, less part counts for the brush and power supply assembly.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the vibration motor by configure the insulating base of the vibration motor housing with a conductive terminal formed a lower surface of the lower fixer; and a brush penetrating the lower fixer and having both ends connected to the terminal and the rotator, as taught by Yamaguchi. Doing so would mechanically improve the power supply assembly and the brush assembly structure relative to the base of the vibration motor so that less part counts resulting in reduction of manufacturing cost.

Conclusion

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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